

I CLAIM:

1. A portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the 5 respective drill bits, comprising:

a rotary power source communicating with a hand-held body; a plurality of chucks, each pair of adjacent chucks having a uniform pre-set spacing,

10 said chucks attached to a housing;

said chucks being rotated by respective linearly aligned drive gears, said drive gears being rigidly attached to respective shafts driving each respective chuck of said plurality of chucks;

15 said drive gears being rotated by a centrally located central gear being rigidly attached to a central drive shaft emerging from said housing,

said central gear being driven by said power source;

each said drive gear being a meshed idler gear which 20 reverses direction, such that all said drive gears are rotated in a same, pre-determined direction.

2. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work 25 areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein said pre-set drill

spacing between adjacent drill accommodating chucks is accomplished by a plurality of idler gears of predetermined diameters.

5 3. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein said housing includes an elongated U-channel housing having a linearly extending slot 10 and a central hole, wherein further each gear is slidably movable in at least one linear direction within said slot.

15 4. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits, as in Claim 3 wherein each said chuck is attached by a respective fastener having an outside diameter permitting said fastener to fit within said central hole.

20 5. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 3 wherein respective fasteners extend from said top flange of said housing, said fasteners 25 attaching to said respective chucks to said housing.

6. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein each said chuck

5 includes a shaft, a gear mounting flange, and a sleeve.

7. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the

10 respective drill bits as in Claim 1 wherein said gears have a predetermined small diameter to permit close placement of said chucks adjacent to each other.

8. The portable hand-held multiple bit drill for imparting a

15 set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein fasteners lock said idler gears in place adjacent to said chucks.

20 9. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1, wherein chuck centerline spacing is selected by using a predetermined size of each

25 respective idler gear.

10. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 9, wherein close spacing is
5 accomplished through the use of small diameter idler gears.

11. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the
10 respective drill bits as in Claim 1, wherein wide spacing is accomplished through the use of large diameter idler gears.

12. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work
15 areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein fasteners for said chucks are started loosely in desired idler gears and said chucks, said fasteners being inserted through said central hole from the bottom of said housing, wherein respective heads of said
20 fasteners are smaller than said central hole but larger than said linear extending slot, said chucks being positioned in a predetermined order to the left and to the right of said central hole, said central chuck being placed in said central hole and locked in place.

13. The portable hand-held multiple bit drill for imparting

a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1, wherein predetermined chuck spacing is varied from a certain minimum to a wide maximum, in 5 multiples of said minimum predetermined spacing, without the necessity of changing idler gears, said spacing being accurately maintained by gear bearings being rigidly mounted in holes to said housing.

10 14. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1, wherein said central drive gear has a drive shaft penetrating said housing, said central 15 drive gear coupling with said drill/.driver to insure that all said drive gears drive in the same direction and are synchronous.

20 15. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 1 wherein each said chuck is rigidly attached to a square shaft with a spring loaded locking ball, said shaft fitting into respective square holes of said 25 respective drive gears.

25

16. The portable hand-held multiple bit drill for imparting

a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 15 wherein a quick-disconnect/connect is formed.

5

17. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work areas are respectively and simultaneously drilled by the respective drill bits as in Claim 15, wherein a magnet is 10 embedded within an end of each blind square hole within a drive gear, retaining each said chuck by magnetic attraction.

18. The portable hand-held multiple bit drill for imparting a set of linearly aligned work areas of a work piece which work 15 areas are respectively and simultaneously drilled by the respective drill bits, as in Claim 1,

wherein said drill is a pivotable adjustable multi drill bit drill having drive gears of adjacent drill chucks being pivotably connected by radial arms to a center of a respective rotating 20 idler gear, of a plurality of linearly extending rotating idler gears,

wherein the angle of orientation of the radial arms controls the spacing between the chucks.